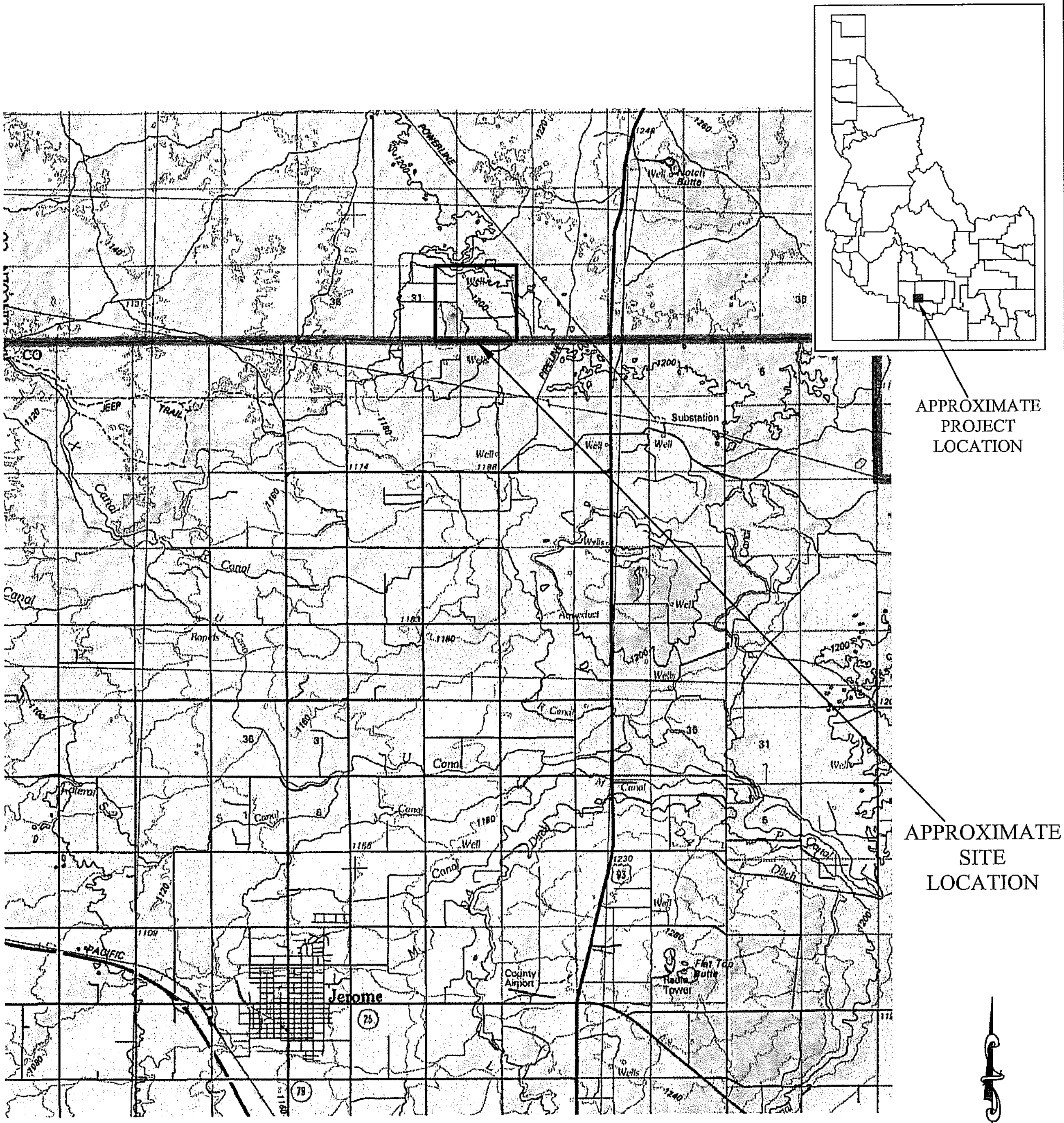


SOURCE: National Geographic TOPO! Maps, 100K Series

4 2 0 2 4

APPROXIMATE SCALE IN MILES

KLEINFELDER

2315 S. Cobalt Point Way
Meridian, Idaho 83642
PH. 208-893-9700 FAX. 208-893-9703
www.kleinfelder.com

SITE LOCATION MAP

Andgar Double A Dairy
305 County Line Road
Jerome, Idaho

DRAWN: April 2008	APPROVED BY:	PROJECT NO. 93142	FILE NAME:

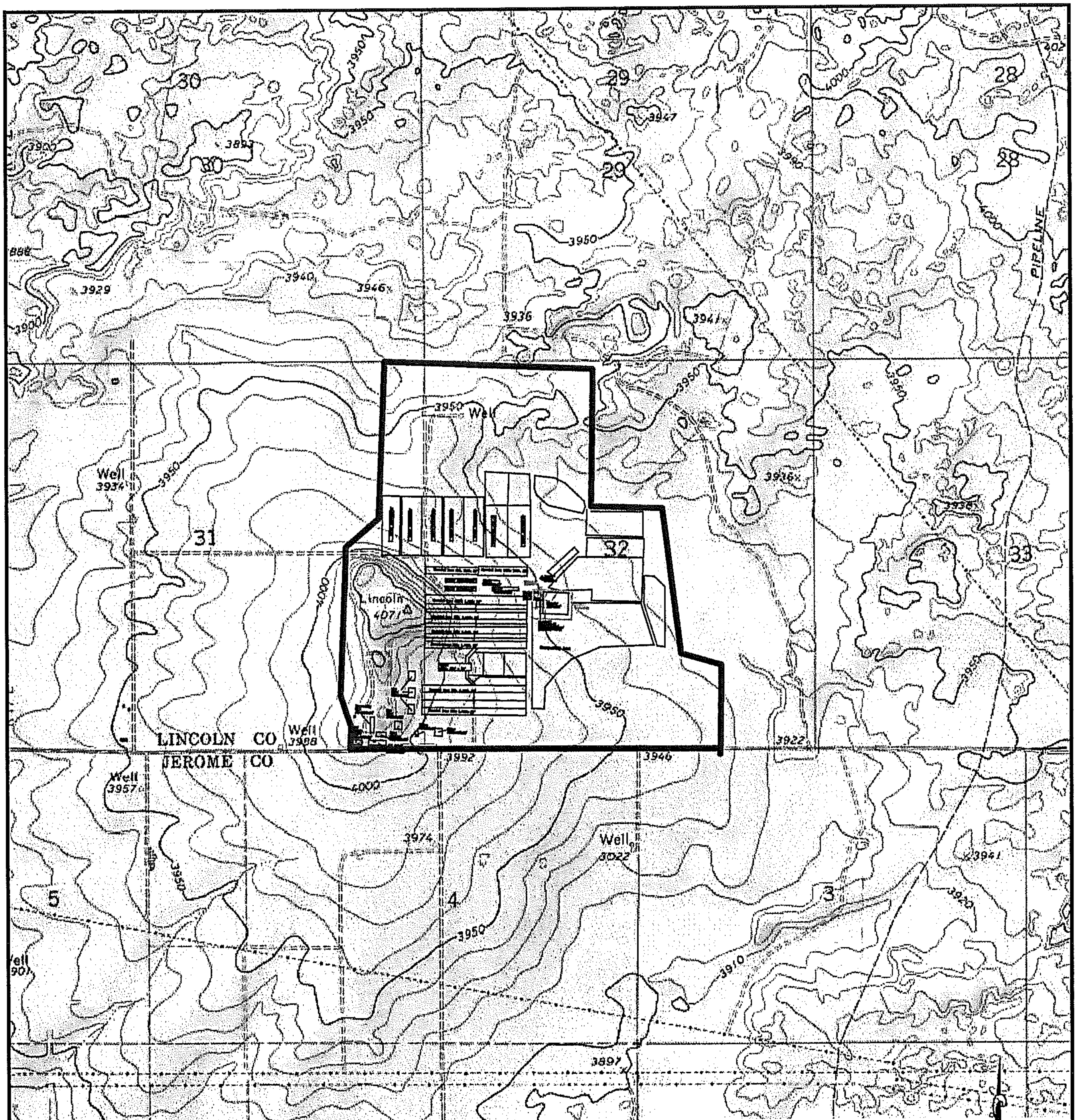
DRAWN BY: A. Kartchner

REVISED BY: A.Kartchner

CHECKED BY: K. Wetzel

FIGURE

1

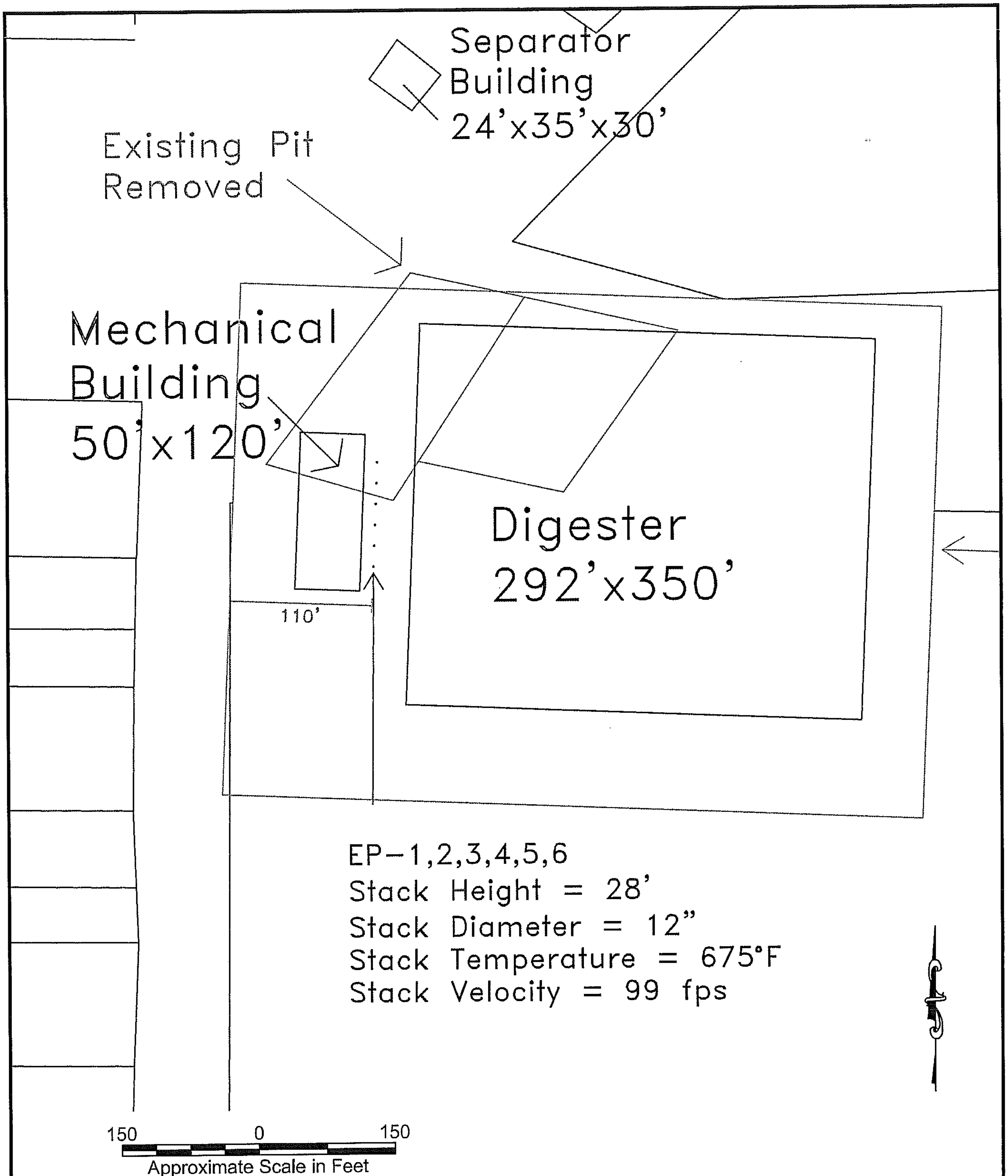


SOURCE: USGS 1:24,000 SCALE QUADRANGLE MAP: Shoshone SW, Idaho 1992

1 0.5 0 0.5 1

APPROXIMATE SCALE IN MILES

KLEINFELDER 2315 S. Cobalt Point Way Meridian, Idaho 83642 PH. 208-893-9700 FAX. 208-893-9703 www.kleinfelder.com	**VICINITY MAP** Andgar Double A Dairy 305 County Line Road Jerome, Idaho	DRAWN BY: A. Kartchner REVISED BY: A.Kartchner CHECKED BY: K. Wetzel FIGURE **2**
DRAWN: April 2008 APPROVED BY:	PROJECT NO. 93142 FILE NAME:	



KLEINFELDER 2315 S. Cobalt Point Way Meridian, Idaho 83642 PH. 208-893-9700 FAX. 208-893-9703 www.kleinfelder.com	**SITE DETAIL** Andgar Double A Dairy 305 County Line Road Jerome, Idaho	DRAWN BY: A. Kartchner REVISED BY: A.Kartchner CHECKED BY: K. Wetzel FIGURE **3**
DRAWN: April 2008 APPROVED BY:	PROJECT NO. 93142 FILE NAME:	

Table A-1
Modeling Protocol Checklist for New Minor Sources or Minor Modifications

Checklist Item	Completed (yes / no)	Protocol Section
Introduction and Purpose	Yes	2
• General overview, facility description, terrain description	Yes	2.1
• Project Overview	Yes	2.1
• Goals of the air quality impact analysis (i.e., demonstrate compliance for a permit to construct or a Tier II operating permit)	Yes	2.1
• Applicable regulations and requirements	Yes	Exec Summary
• Pollutants of concern	Yes	Exec Summary
Emission and Source Data	Yes	3
• Facility processes and emission controls effected by the permitting action	Yes	3.1
• Include a list of emission points that will be included in the application. Present a table showing current actual and future allowable emission rates (in maximum pounds per hour tons per year) and the requested emission increase (future allowable minus current actual)	Yes	3.2
• Good engineering practice (GEP) stack-height analysis	Yes	3.3
• Facility layout: location of sources, buildings, and fence lines	Yes	3.4
• Source parameters (emissions rates, UTM coordinates, stack height, stack elevation, stack diameter, stack-gas exit velocity, and stack-gas exit temperature) for each new or modified emission point	Yes	3.5
• Methodology for including area and volume sources in the modeling analysis	Yes	3.6
• Methodology for including/excluding sources from the modeling analysis	Yes	3.7
Air Quality Modeling Methodology	Yes	4
• Model selection and justification	Yes	4.1
• Model setup and application - Model options (i.e., regulatory default) - *Terrain Options* - *Land-use analysis* - *Building Downwash* - *Choice of Meteorology* - *Discrete Distance Option*	Yes	4.2
• Elevation data - *Methodology for accounting for complex terrain*	n/a	

Table A-1 (Continued)
Modeling Protocol Checklist for New Minor Sources or Minor Modifications

Checklist Item	Completed (yes / no)	Protocol Section
• Receptor network - *Description of receptor grids – include methodology for ensuring the maximum concentration will be estimated* - *Discussion/justification of ambient air* - *Determination of receptor elevations*	Yes	4.7
• Meteorological data - *Selection of meteorological databases – justification of appropriateness of meteorological data to area of interest* - *Meteorological data processing* - *Meteorological data analysis (e.g., wind rose)*	Yes	4.6
• Background concentrations	Yes	4.8
Applicable Regulatory Limits	Yes	5
• Methodology for evaluation of compliance with standards (i.e., determination of design concentration)	Yes	5.1
• Full impact analysis - *TAPs analysis* - *NAAQS analysis*	Yes	5.1
• Presentation of results – state how the results of the modeling analysis will be displayed (i.e., list what information will be included)	Yes	5.1
References	Yes	attachment

KLEINFELDER
Bright People. Right Solutions.

APPENDIX C

Modeling Protocol Approval Letter

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 NORTH HILTON, BOISE, ID 83706 · (208) 373-0502

C. L. "BUTCH" OTTER, GOVERNOR
TONI HARDESTY, DIRECTOR

April 19, 2008

Kelli Wetzel
Kleinfelder
Meridian, Idaho

RE: Modeling Protocol for Various Manure Digester Projects at Dairies in Idaho

Keilli:

DEQ received your dispersion modeling protocol on April 15, 2008. The modeling protocol was submitted on behalf of Andgar Corporation (Andgar). The modeling protocol proposes methods and data for use in an ambient air impact analyses in support of 15-day pre-permit construction approval Permit to Construct applications for construction of electrical generators, combusting biogas generated from manure digesters, at various dairies in Idaho.

The modeling protocol has been reviewed and DEQ has the following comments:

- Comment 1: Approval of this protocol will be considered as an approved protocol for projects involving the operation of electrical generators, operated by Andgar, at Idaho dairies.

- Comment 2: Elevated Terrain. Review of the quadrangle map indicates the presence of substantially elevated terrain about ¼ mile west of the emissions sources. The submitted application must demonstrate that impacts to such areas will not cause or significantly contribute to a violation of any air quality standards. In situations where there are numerous ambient air locations within elevated terrain, AERMOD should be used.

- Comment 3: Downwash must be adequately accounted for. In the submitted protocol, it appears the mechanical building is the only building that could cause plume downwash (the stacks are not within a distance of 5L of any other building, where L is the lesser dimension of building height or projected width). For other applications, all buildings where the stack(s) are within 5L must be assessed to determine the controlling building with regard to building downwash. The controlling building is the one having the highest GEP stack height. GEP is given by $H = S + 1.5L$, where S is the building height.

In situations where there are numerous buildings that could contribute to plume downwash, AERMOD should be used to properly account for downwash.

- Comment 4: The application should provide documentation and justification for stack parameters used in the modeling analyses, clearly showing how stack gas temperatures and flow rates were estimated or calculated. In most instances, applicants should use typical parameters, not maximum temperatures and flow rates. In cases where such parameters were verified by a system audit, the application should indicate how such parameters were verified (by direct measurement, by calculation, etc.). The actual calculation sheets are not required in most instances.

- Comment 5: Correction of persistence factor: Table 5-2 in the protocol provides persistence factors to use with SCREEN3. The annual factor for criteria pollutants was listed as 0.8. The correct factor is 0.08.

DEQ's modeling staff considers the submitted dispersion modeling protocol, with resolution of the additional items noted above, to be approved. It should be noted, however, that the approval of this modeling protocol is not meant to imply approval of a completed dispersion modeling analysis. Please refer to the *State of Idaho Air Quality Modeling Guideline*, which is available on the Internet at http://www.deq.state.id.us/air/permits_forms/permitting/modeling_guideline.pdf, for further guidance.

To ensure a complete and timely review of the final analysis, our modeling staff requests that electronic copies of all modeling input and output files are submitted with an analysis report. If you have any further questions or comments, please contact me at (208) 373-0112.

Sincerely,

Kevin Schilling

Kevin Schilling
Stationary Source Air Modeling Coordinator
Idaho Department of Environmental Quality
208 373-0112

APPENDIX D

Emissions Calculations and Screen3 Outputs

Emission Calculations
Double A Dairy, Jerome, Idaho

Six 750 kW Genset Electrical Generators (Guascor 560)

Capacity Assumptions		
Power	**6,342**	bhp
Fuel consumption	**6,505**	btu/bhp-hour
Fuel input at capacity	41.3	MMBtu/hr

Pollutant	Emission factor (lb/MMbtu)	Data Source	Emissions		
			lbs/hr	tons/yr	grams/sec
PM10	**9.99E-03**	AP-42 Section 3.2, Table 3.2-2 (includes filterable and condensible)	0.41	1.80	5.2E-02
PM2.5	**9.99E-03**		0.41	1.80	5.2E-02
SO2	7.48E-02	Vendor	3.09	13.5	3.9E-01
NOx	3.39E-01	Vendor	13.98	61.2	1.8E+00
CO	5.42E-01	Vendor	22.37	98.0	2.8E+00
VOC	3.39E-01	Vendor	13.98	61.2	1.8E+00
Lead	nd	Vendor			0.0E+00
Acetaldehyde	**5.30E-05**	EPA AP-42 Section 3.1, April 2000 (Rating D)	2.2E-03	9.6E-03	2.8E-04
Acrolein	**2.60E-05**	JMM cons eng. Dec 10, 1990 - Fire database (Rating U)	1.1E-03	4.7E-03	1.4E-04
Benzene	**6.90E-04**	Radian fire database 1993 release (Rating U)	2.8E-02	1.2E-01	3.6E-03
Dichloromethane	**1.01E-04**	Radian fire database 1993 release (Rating U)	4.2E-03	1.8E-02	5.2E-04
Formaldehyde	**1.90E-04**	EPA AP-42 Section 3.1, April 2000 (Rating D)	7.8E-03	3.4E-02	9.9E-04
Isomers of Xylene	**1.37E-04**	Radian fire database 1993 release (Rating U)	5.6E-03	2.5E-02	7.1E-04
Nickel	**2.00E-06**	EPA AP-42 Section 3.1, April 2000 (Rating D)	8.3E-05	3.6E-04	1.0E-05
Selenium	**1.10E-05**	EPA AP-42 Section 3.1, April 2000 (Rating D)	4.5E-04	2.0E-03	5.7E-05
Styrene	**5.26E-05**	Radian fire database 1993 release (Rating U)	2.2E-03	9.5E-03	2.7E-04
Toluene	**2.62E-04**	Radian fire database 1993 release (Rating U)	1.1E-02	4.7E-02	1.4E-03
Trichloroethylene	**2.00E-05**	JMM cons eng. Dec 10, 1990 - Fire database (Rating U)	8.3E-04	3.6E-03	1.0E-04
Vinyl Chloride	**5.60E-05**	JMM cons eng. Dec 10, 1990 - Fire database (Rating U)	2.3E-03	1.0E-02	2.9E-04

Total Emissions Compared to TAP Screening Els

Pollutant	Emissions			TAP Screening	
	lbs/hr	tons/yr	grams/sec	TAP Screening EL (lb/hr)	Exceeds EL?
PM10	0.41	1.80	5.2E-02	Not applicable	
PM2.5	0.41	1.80	5.2E-02		
SO2	3.09	13.51	3.9E-01		
NOx	13.98	61.24	1.8E+00		
CO	22.37	97.98	2.8E+00		
VOC	13.98	61.24	1.8E+00		
Lead					
Acetaldehyde	2.2E-03	9.6E-03	2.8E-04	3.0E-03	No
Acrolein	1.1E-03	4.7E-03	1.4E-04	1.7E-02	No
Benzene	2.8E-02	1.2E-01	3.6E-03	8.0E-04	Yes
Dichloromethane	4.2E-03	1.8E-02	5.2E-04	1.6E-03	Yes
Formaldehyde	7.8E-03	3.4E-02	9.9E-04	5.1E-04	Yes
Isomers of Xylene	5.6E-03	2.5E-02	7.1E-04	2.9E+01	No
Nickel	8.3E-05	3.6E-04	1.0E-05	2.7E-05	Yes
Selenium	4.5E-04	2.0E-03	5.7E-05	1.3E-02	No
Styrene	2.2E-03	9.5E-03	2.7E-04	6.7E+00	No
Toluene	1.1E-02	4.7E-02	1.4E-03	2.5E+01	No
Trichloroethylene	8.3E-04	3.6E-03	1.0E-04	5.1E-04	Yes
Vinyl Chloride	2.3E-03	1.0E-02	2.9E-04	9.4E-04	Yes

Modeling Results at leased property boundary

Persistency Factors	
3 hour	0.9
8 hour	0.7
24 hour	0.4
Annual criteria	0.08
Annual TAPs	0.125

Maximum SCREEN3 Impact using concentration input of 1 gram/sec (X/Q):

Model Results **255.10** (ug/m3)/(g/s)

Six 750 kW Genset Electrical Generators (Guascor 560)

Pollutant	Emissions (grams/sec)	Estimated impacts (ug/m3) (1-hr avg)
PM10	5.19E-02	1.32E+01
PM2.5	5.19E-02	1.32E+01
SO2	3.89E-01	9.92E+01
NO2 (Note 1)	1.32E+00	3.37E+02
CO	2.82E+00	7.19E+02
VOC	1.76E+00	Modeling not conducted
Lead	0.00E+00	
Acetaldehyde	2.75E-04	Emissions are below EL
Acrolein	1.35E-04	Emmisions are below EL
Benzene	3.58E-03	9.14E-01
Dichloromethane	5.24E-04	1.34E-01
Formaldehyde	9.88E-04	2.52E-01
Isomers of Xylene	7.11E-04	Emmisions are below EL
Nickel	1.04E-05	2.65E-03
Selenium	5.72E-05	Emmisions are below EL
Styrene	2.73E-04	Emmisions are below EL
Toluene	1.36E-03	Emmisions are below EL
Trichloroethylene	1.04E-04	2.65E-02
Vinyl Chloride	2.91E-04	7.43E-02

Notes

1. NOx conversion to NO2 assumed 0.75, per EPA guidance.

Pollutant	Emissions (grams/sec)	Estimated impacts (ug/m3) (1-hr avg)	1-hr average adjusted to 24 hr average	1 -hr average adjusted to annual average	1-hr average adjusted to 8 hr average	1-hr average adjusted to 3 hr average
PM10	5.19E-02	1.32E+01	5.30E+00	1.06E+00		
PM2.5	5.19E-02	1.32E+01	5.30E+00	1.06E+00		
SO2	3.89E-01	9.92E+01	3.97E+01	7.93E+00		8.92E+01
NO2 (Note 1)	1.32E+00	3.37E+02		2.70E+01		
CO	2.82E+00	7.19E+02			5.03E+02	
VOC	1.76E+00	Modeling not conducted				
Lead	0.00E+00					
Acetaldehyde	2.75E-04	Emissions are below EL				
Acrolein	1.35E-04	Emissions are below EL				
Benzene	3.58E-03	9.14E-01		1.14E-01		
Dichloromethane	5.24E-04	1.34E-01		1.67E-02		
Formaldehyde	9.88E-04	2.52E-01		3.15E-02		
Isomers of Xylene	7.11E-04	Emissions are below EL				
Nickel	1.04E-05	2.65E-03		3.32E-04		
Selenium	5.72E-05	Emmisions are below EL				
Styrene	2.73E-04	Emissions are below EL				
Toluene	1.36E-03	Emissions are below EL				
Trichloroethylene	1.04E-04	2.65E-02	1.06E-02	3.32E-03		
Vinyl Chloride	2.91E-04	7.43E-02		9.28E-03		

Notes

1. NOx conversion to NO2 assumed 0.75, per EPA guidance.

DEQ Background Concentrations For Rural Areas

Pollutant		Background Concentration (ug/m3)
PM10	24 hour	73
	Annual	26
SO2	3 hour	34
	24 hour	26
	Annual	8
NO2	Annual	17
CO	1 hour	3,600
	8 hour	2,300

Estimated Impacts Including Background Concentrations

Pollutant		Modeled Impact (ug/m3)
PM10	24 hour	78
	Annual	27
SO2	3 hour	123
	24 hour	66
	Annual	16
NO2	Annual	44
CO	1 hour	4,319
	8 hour	2,803

Pollutant	Averaging Period	Modeled Impacts (µg/m³) (Note 1)	NAAQS or AAC (µg/m³)
PM_{10}	24 hour Annual	78.30 27.06	150 50
$PM_{2.5}$	24 hour Annual	Note 2	35 15
NO_2	Annual	43.96	100
SO_2	3 hour 24 hour Annual	123.25 65.67 15.93	1,300 365 80
CO	1 hour 8 hour	4,319.04 2,803.33	40,000 10,000
Acetaldehyde	Annual	Below TAP EL	
Acrolein	24 hour	Below TAP EL	
Benzene	Annual	0.11	0.12
Dichloromethane	Annual	0.017	0.24
Formaldehyde	Annual	0.031	0.077
Isomers of Xylene	24 hour	Below TAP EL	
Nickel	Annual	0.0003	0.0042
Selenium	24 hour	Below TAP EL	
Styrene	24 hour	Below TAP EL	
Toluene	24 hour	Below TAP EL	
Trichloroethylene	24 hour Annual	0.011 0.003	13,450 0.77
Vinyl Chloride	Annual	0.009	0.14

Note 1 – Modeled Impacts for primary pollutants considers background concentrations.
Note 2 – Background for PM2.5 has not been established and modeled impacts could not be determined

Modeling Results at Elevated Terrain

Persistency Factors	
3 hour	**0.9**
8 hour	**0.7**
24 hour	**0.4**
Annual criteria	**0.08**
Annual TAPs	**0.125**

Maximum SCREEN3 Impact using concentration input of 1 gram/sec (X/Q):

Model Results **29.30** (ug/m3)/(g/s)

Six 750 kW Genset Electrical Generators (Guascor 560)

Pollutant	Emissions (grams/sec)	Estimated impacts (ug/m3) (1-hr avg)
PM10	5.19E-02	3.80E+00
PM2.5	5.19E-02	3.80E+00
SO2	3.89E-01	2.85E+01
NO2 (Note 1)	1.32E+00	9.68E+01
CO	2.82E+00	2.06E+02
VOC	1.76E+00	Modeling not conducted
Lead	0.00E+00	0.00E+00
Acetaldehyde	2.75E-04	Emissions are below EL
Acrolein	1.35E-04	Emmisions are below EL
Benzene	3.58E-03	2.63E-01
Dichloromethane	5.24E-04	3.84E-02
Formaldehyde	9.88E-04	7.23E-02
Isomers of Xylene	7.11E-04	Emmisions are below EL
Nickel	1.04E-05	7.62E-04
Selenium	5.72E-05	Emmisions are below EL
Styrene	2.73E-04	Emmisions are below EL
Toluene	1.36E-03	Emmisions are below EL
Trichloroethylene	1.04E-04	7.62E-03
Vinyl Chloride	2.91E-04	2.13E-02

Notes

1. NOx conversion to NO2 assumed 0.75, per EPA guidance.

Pollutant	Emissions (grams/sec)	Estimated impacts (ug/m3) (1-hr avg)	1-hr average adjusted to 24 hr average	1 -hr average adjusted to annual average	1-hr average adjusted to 8 hr average	1-hr average adjusted to 3 hr average
PM10	5.19E-02	3.80E+00	1.52E+00	3.04E-01		
PM2.5	5.19E-02	3.80E+00	1.52E+00	3.04E-01		
SO2	3.89E-01	2.85E+01	1.14E+01	2.28E+00		2.56E+01
NO2 (Note 1)	1.32E+00	9.68E+01		7.74E+00		
CO	2.82E+00	2.06E+02			1.45E+02	
VOC	1.76E+00	Modeling not conducted				
Lead	0.00E+00					
Acetaldehyde	2.75E-04	Emissions are below EL				
Acrolein	1.35E-04	Emissions are below EL				
Benzene	3.58E-03	2.63E-01		3.28E-02		
Dichloromethane	5.24E-04	3.84E-02		4.80E-03		
Formaldehyde	9.88E-04	7.23E-02		9.04E-03		
Isomers of Xylene	7.11E-04	Emissions are below EL				
Nickel	1.04E-05	7.62E-04		9.52E-05		
Selenium	5.72E-05	Emmisions are below EL				
Styrene	2.73E-04	Emissions are below EL				
Toluene	1.36E-03	Emissions are below EL				
Trichloroethylene	1.04E-04	7.62E-03	3.05E-03	9.52E-04		
Vinyl Chloride	2.91E-04	2.13E-02		2.67E-03		

Notes

1. NOx conversion to NO2 assumed 0.75, per EPA guidance.

DEQ Background Concentrations For Rural Areas

Pollutant	Background Concentration (ug/m3)
PM10	73

Estimated Impacts Including Background Concentrations

Pollutant		Modeled Impact (ug/m3)
PM10	24 hour	75

	26
SO2	34
	26
	8
NO2	17
CO	3,600
	2,300

	Annual	26
SO2	3 hour	60
	24 hour	37
	Annual	10
NO2	Annual	25
CO	1 hour	3,806
	8 hour	2,445

Pollutant	Averaging Period	Modeled Impacts ($\mu g/m^3$) (Note 1)	NAAQS or AAC ($\mu g/m^3$)
PM_{10}	24 hour	74.52	150
	Annual	26.30	50
$PM_{2.5}$	24 hour		35
	Annual	Note 2	15
NO_2	Annual	24.74	100
SO_2	3 hour	59.63	1,300
	24 hour	37.39	365
	Annual	10.28	80
CO	1 hour	3,806.47	40,000
	8 hour	2,444.53	10,000
Acetaldehyde	Annual	Below TAP EL	
Acrolein	24 hour	Below TAP EL	
Benzene	Annual	0.03	0.12
Dichloromethane	Annual	0.005	0.24
Formaldehyde	Annual	0.009	0.077
Isomers of Xylene	24 hour	Below TAP EL	
Nickel	Annual	0.0001	0.0042
Selenium	24 hour	Below TAP EL	

Styrene	24 hour	Below TAP EL	
Toluene	24 hour	Below TAP EL	
Trichloroethylene	24 hour Annual	0.003 0.001	13,450 0.77
Vinyl Chloride	Annual	0.003	0.14

Note 1 – Modeled Impacts for primary pollutants considers background

Note 2 – Background for PM2.5 has not been established and modeled impacts could not be determined

Assumptions:

250 ppm SO2 concentration after H2S scrubbing of the gas stream
379 scf gas/lb-mole
34 Molecular weight of H2S
64 Molecular weight of SO2
20.3 scf/sec exhaust rate 1753920

$$\frac{250 \text{ cf H2S}}{1.00\text{E}+06 \text{ cf}} \times \frac{20.3 \text{ scf}}{1 \text{ sec}} \times \frac{3{,}600 \text{ sec}}{1 \text{ hr}} \times \frac{1 \text{ lb-mole}}{379 \text{ scf}} \times \frac{34 \text{ mole}}{1} = \frac{1.64 \text{ lb H2S}}{\text{hr}}$$

$$\frac{1.64 \text{ lb H2S}}{1 \text{ hr}} \times \frac{64 \text{ mole SO2}}{34 \text{ mole H2S}} = \frac{\mathbf{3.09 \text{ lb SO2}}}{\mathbf{hr}}$$

Emission Factor

$$\frac{3.09 \text{ lb SO2}}{\text{hr}} \times \frac{\text{hr}}{41.25 \text{ MMBtu}} = \frac{\mathbf{0.075 \text{ lb SO2}}}{\mathbf{MMBtu}}$$

05/07/08
20:43:02

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

C:\Lakes\ScreenView\dcd.scr

COMPLEX TERRAIN INPUTS:
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =      1.00000
   STACK HT (M)             =       8.5300
   STACK DIAMETER (M)       =        .3048
   STACK VELOCITY (M/S)     =      30.1800
   STACK GAS TEMP (K)       =     630.0000
   AMBIENT AIR TEMP (K)     =     293.0000
   RECEPTOR HEIGHT (M)      =        .0000
   URBAN/RURAL OPTION       =        RURAL

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =    3.677 M**4/S**3;  MOM. FLUX =    9.839 M**4/S**2.


FINAL STABLE PLUME HEIGHT (M) =   36.6
DISTANCE TO FINAL RISE (M)    =  151.3

                                 *VALLEY 24-HR CALCS*  **SIMPLE TERRAIN 24-HR CALCS**
                                             PLUME HT            PLUME HT
 TERR              MAX 24-HR                 ABOVE STK           ABOVE STK       U10M USTK
  HT      DIST       CONC          CONC      BASE (M)   CONC     HGT (M)   SC    (M/S)
  (M)      (M)    (UG/M**3)     (UG/M**3)             (UG/M**3)
 -----  -------  ----------    ----------   ------   ----------  ------   --  ---- ----
   37.     418.    29.30          29.30        36.6     .0000         .0   0    .0   .0

        ***************************************
        *** SUMMARY OF SCREEN MODEL RESULTS ***
        ***************************************

 CALCULATION          MAX CONC      DIST TO    TERRAIN
  PROCEDURE          (UG/M**3)      MAX (M)     HT (M)
 --------------     -----------    -------    -------
 COMPLEX TERRAIN       29.30          418.         37.  (24-HR CONC)

 ***************************************************
 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
 ***************************************************
```

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

C:\Lakes\ScreenView\dcd.scr

COMPLEX TERRAIN INPUTS:
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =      1.00000
   STACK HT (M)             =       8.5300
   STACK DIAMETER (M)       =        .3048
   STACK VELOCITY (M/S)     =      30.1800
   STACK GAS TEMP (K)       =     630.0000
   AMBIENT AIR TEMP (K)     =     293.0000
   RECEPTOR HEIGHT (M)      =        .0000
   URBAN/RURAL OPTION       =        RURAL

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =    3.677 M**4/S**3;  MOM. FLUX =    9.839 M**4/S**2.


FINAL STABLE PLUME HEIGHT (M) =   36.6
DISTANCE TO FINAL RISE (M)    =  151.3

      ***************************************
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ***************************************

 CALCULATION           MAX CONC     DIST TO    TERRAIN
  PROCEDURE           (UG/M**3)     MAX (M)     HT (M)
 --------------      -----------    -------    -------

 ***************************************************
 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
 ***************************************************
```

04/10/08
15:56:15

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

C:\Lakes\ScreenView\dcd.scr

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE              =       POINT
   EMISSION RATE (G/S)      =     1.00000
   STACK HEIGHT (M)         =      8.5300
   STK INSIDE DIAM (M)      =       .3048
   STK EXIT VELOCITY (M/S)=     30.1800
   STK GAS EXIT TEMP (K)    =    630.0000
   AMBIENT AIR TEMP (K)     =    293.0000
   RECEPTOR HEIGHT (M)      =       .0000
   URBAN/RURAL OPTION       =       RURAL
   BUILDING HEIGHT (M)      =      6.7100
   MIN HORIZ BLDG DIM (M) =     15.2400
   MAX HORIZ BLDG DIM (M) =     36.5700

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =    3.677 M**4/S**3;  MOM. FLUX =    9.839 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN DISCRETE DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC              U10M   USTK  MIX HT   PLUME  SIGMA   SIGMA
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)   (M)     HT (M)  Y (M)   Z (M)  DWASH
-------  ----------  ----  -----  -----  ------   ------  ------  ------  -----
    34.    255.1       4    10.0   10.0  3200.0     8.62    2.97    3.97    SS

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 ********************************************
      *** REGULATORY (Default) ***
     PERFORMING CAVITY CALCULATIONS
   WITH ORIGINAL SCREEN CAVITY MODEL
          (BRODE, 1988)
 ********************************************


 *** CAVITY CALCULATION - 1 ***       *** CAVITY CALCULATION - 2 ***
  CONC (UG/M**3)     =     .0000        CONC (UG/M**3)      =    .0000
  CRIT WS @10M (M/S) =     99.99        CRIT WS @10M (M/S) =    99.99
  CRIT WS @ HS (M/S) =     99.99        CRIT WS @ HS (M/S) =    99.99
  DILUTION WS (M/S)  =     99.99        DILUTION WS (M/S)  =    99.99
  CAVITY HT (M)      =      7.27        CAVITY HT (M)      =     6.71
  CAVITY LENGTH (M)  =     27.09        CAVITY LENGTH (M)  =    17.01
  ALONGWIND DIM (M)  =     15.24        ALONGWIND DIM (M)  =    36.57
```

```
CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S.  CONC SET = 0.0

****************************************
      END OF CAVITY CALCULATIONS
****************************************


     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION          MAX CONC     DIST TO    TERRAIN
  PROCEDURE          (UG/M**3)     MAX (M)     HT (M)
--------------     -----------    -------    -------
SIMPLE TERRAIN        255.1          34.          0.

***************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
***************************************************
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KLEINFELDER
Bright People. Right Solutions.

APPENDIX E

Affidavit of Publication – Public Notice Meeting

Affidavit of Publication

STATE OF IDAHO)
COUNTY OF TWIN FALLS) SS.

I, Ruby Aufderheide, being first duly sworn upon oath, depose and say that I am Legal Clerk of the TIMES-NEWS,published daily at, Twins Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for one consecutive publication, commencing with the issue dated 25th day of May, 2008 and ending with the issue dated 25th day of May, 2008

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterrupted.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho to be issued thereof Thursday is announced as the day on which said legal will be published.

Ruby Aufderheide

Ruby Aufderheide, Legal Clerk

STATE OF IDAHO
COUNTY OF TWIN FALLS

On this 27th day of May, 2008, before me,

a Notary Public, personally appeared Ruby Aufderheide,
known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Linda Capps McGuire

Notary Public for Idaho
Residing at Twin Falls, Idaho.

My commision expires: 5 19 09

LINDA CAPPS-McGUIRE
NOTARY PUBLIC
STATE OF IDAHO

PUBLIC NOTICE

AgPower Partners #5, LLC has applied for an air quality Permit To Construct for an anaerobic digester located at 305 County Line Road in Jerome, ID. An informational meeting will be held in the Jerome City Library Conference Room located at 100 First Avenue East in Jerome, ID at 6:00pm on June 4, 2008.

PUBLISH: May 25, 2008

KLEINFELDER
Bright People. Right Solutions.

APPENDIX F

EPA letter regarding 40 CFR 60, Subpart JJJJ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RECEIVED
APR 28 2008
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

APR 24 2008

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Jonathan Pettit
Air Quality Permit Analyst
Idaho Department of Environmental Quality
Air Quality Division
1410 N. Hilton
Boise, Idaho 83706-1255

Dear Mr. Pettit:

This is in response to your request for guidance regarding the use of Air to Fuel Ratio controllers (AFR) on lean burn and rich burn engines that are subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines at 40 CFR Part 60, Subpart JJJJ. Specifically, you request clarification of the provisions at 40 CFR Part 60, Section 60.4243(g) regarding: 1) whether use of an AFR is an enforceable requirement for engines that use three way catalysts; and 2) does the use of an AFR apply to both lean burn and rich burn engines that use three way catalysts.

Although not stated explicitly in 40 CFR Part 60, Subpart JJJJ, the use of an AFR is an enforceable requirement for rich burn engines that use three way catalysts. Question 10.2.2 in the 40 CFR Part 60, Subpart JJJJ Response To Comment document clarifies this requirement by stating that:

> An AFR is necessary and must be included with the operation of three way catalysts on rich burn engines and will have to be operated in an appropriate manner to ensure the proper engine operation and to minimize emissions.

Three way catalysts simultaneously reduce oxides of nitrogen (NO_X), hydrocarbons (HC) and carbon monoxide (CO) through a series of reduction and oxidation reactions for engines that operate at or near stoichiometric conditions. The AFR is necessary because it maintains the appropriate air to fuel ratio so that these oxidation and reduction reactions can take place in the catalyst. In their absence, the three way catalyst would not work properly, and the engine would be unable to consistently comply with the emission requirements specified in 40 CFR Part 60, Subpart JJJJ.

The provisions at 40 CFR Part 60, Section 60.4243(g) are not intended to apply to lean burn engines. This is because three way catalysts are designed to reduce HC, CO and NO_X emissions from engines that run at or near stoichiometric conditions and not from lean burn engines that operate at very lean air to fuel ratios and emit exhaust gases with high levels of excess air.

This response has been coordinated with the Office of General Counsel and the Office of Air Quality Planning and Standards. If you have any questions, please contact John DuPree of my staff at (202) 564-5950.

Sincerely yours,

Ken Giglielle

Kenneth A. Giglello, Acting Director
Compliance Assessment and Media Programs Division
Office of Compliance